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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/933,838	08/22/2001	Guiping Zhang	J11 103	7282

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EXAMINER

TSANG FOSTER, SUSY N

ART UNIT	PAPER NUMBER
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1745

DATE MAILED: 05/21/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/933,838	Applicant(s) ZHANG ET AL.	
	Examiner Susy N Tsang-Foster	Art Unit 1745	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 August 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-7 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. This application contains claims directed to the following patentably distinct species of the claimed invention:

First category of species for the binder:

A single species is to be elected from the 311 species listed below for the binder.

The species with a single component are:

(1) modified polyacrylates (MPAC) alone obtained from a copolymer of carboxylic acid and acrylonitrile; (2) modified polyacrylates (MPAC) alone obtained from a copolymer of carboxylic acid and 2-ethylhexylacrylate; (3) modified polyacrylates (MPAC) alone obtained from a copolymer of carboxylic acid and acrylic acid; (4) modified polyacrylates (MPAC) alone obtained from a copolymer of carboxylic acid and methacrylic acid; (5) modified polyacrylates (MPAC) alone obtained from a copolymer of carboxylic acid and methyl acrylate; (6) modified polyacrylates (MPAC) alone obtained from a copolymer of carboxylic acid and methyl methacrylate; (7) modified polyacrylates (MPAC) alone obtained from a copolymer of carboxylic acid and ethyl acrylate; (8) modified polyacrylates (MPAC) alone obtained from a copolymer of carboxylic acid and butyl acrylate; (9) modified polyacrylates (MPAC) alone obtained from a copolymer of carboxylic acid and butyl methacrylate; (10) modified

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polyacrylates (MPAC) alone obtained from a copolymer of carboxylic acid and propyl acrylate; (11) modified polyacrylates (MPAC) alone obtained from a copolymer of carboxylic acid and acrylamide; (12) modified polyacrylates (MPAC) alone obtained from a copolymer of carboxylic acid and vinylacetate; (13) modified polyacrylates (MPAC) alone obtained from a copolymer of carboxylic acid and dodecyl acrylate; (14) modified polyacrylates (MPAC) alone obtained from a copolymer of carboxylic acid and octadecyl acrylate; (15) modified polyacrylates (MPAC) alone obtained from a copolymer of carboxylic acid and hydroxyethyl acrylate; (16) modified polyacrylates (MPAC) alone obtained from a copolymer of carboxylic acid and hydroxypropyl acrylate; (17) modified polyacrylates (MPAC) alone obtained from a copolymer of carboxylic acid and itaconic acid;

(18) modified polyacrylates (MPAC) alone obtained from a copolymer of carboxylic acid and acrylonitrile and styrene; (19) modified polyacrylates (MPAC) alone obtained from a copolymer of carboxylic acid and 2-ethylhexylacrylate and styrene; (20) modified polyacrylates (MPAC) alone obtained from a copolymer of carboxylic acid and acrylic acid and styrene; (21) modified polyacrylates (MPAC) alone obtained from a copolymer of carboxylic acid and methacrylic acid and styrene; (22) modified polyacrylates (MPAC) alone obtained from a copolymer of carboxylic acid and methyl acrylate and styrene; (23) modified polyacrylates (MPAC) alone obtained from a copolymer of carboxylic acid and methyl methacrylate and styrene; (24) modified polyacrylates (MPAC) alone obtained from a copolymer of carboxylic acid and ethyl acrylate and styrene; (25) modified polyacrylates (MPAC) alone obtained from a copolymer of carboxylic acid and butyl acrylate and styrene; (26) modified polyacrylates (MPAC) alone obtained from a copolymer of carboxylic acid and butyl methacrylate and

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styrene; (27) modified polyacrylates (MPAC) alone obtained from a copolymer of carboxylic acid and propyl acrylate and styrene; (28) modified polyacrylates (MPAC) alone obtained from a copolymer of carboxylic acid and acrylamide and styrene; (29) modified polyacrylates (MPAC) alone obtained from a copolymer of carboxylic acid and vinylacetate and styrene; (30) modified polyacrylates (MPAC) alone obtained from a copolymer of carboxylic acid and dodecyl acrylate and styrene; (31) modified polyacrylates (MPAC) alone obtained from a copolymer of carboxylic acid and octadecyl acrylate and styrene; (32) modified polyacrylates (MPAC) alone obtained from a copolymer of carboxylic acid and hydroxyethyl acrylate and styrene; (33) modified polyacrylates (MPAC) alone obtained from a copolymer of carboxylic acid and hydroxypropyl acrylate and styrene; (34) modified polyacrylates (MPAC) alone obtained from a copolymer of carboxylic acid and itaconic acid and styrene;

(35) modified polyacrylates (MPAC) alone obtained from a copolymer of carboxylic acid and acrylonitrile and butadiene; (36) modified polyacrylates (MPAC) alone obtained from a copolymer of carboxylic acid and 2-ethylhexylacrylate and butadiene; (37) modified polyacrylates (MPAC) alone obtained from a copolymer of carboxylic acid and acrylic acid and butadiene; (38) modified polyacrylates (MPAC) alone obtained from a copolymer of carboxylic acid and methacrylic acid and butadiene; (39) modified polyacrylates (MPAC) alone obtained from a copolymer of carboxylic acid and methyl acrylate and butadiene; (40) modified polyacrylates (MPAC) alone obtained from a copolymer of carboxylic acid and methyl methacrylate and butadiene; (41) modified polyacrylates (MPAC) alone obtained from a copolymer of carboxylic acid and ethyl acrylate and butadiene; (42) modified polyacrylates (MPAC) alone obtained from a copolymer of carboxylic acid and butyl acrylate and butadiene;

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(43) modified polyacrylates (MPAC) alone obtained from a copolymer of carboxylic acid and butyl methacrylate and butadiene; (44) modified polyacrylates (MPAC) alone obtained from a copolymer of carboxylic acid and propyl acrylate and butadiene; (45) modified polyacrylates (MPAC) alone obtained from a copolymer of carboxylic acid and acrylamide and butadiene; (46) modified polyacrylates (MPAC) alone obtained from a copolymer of carboxylic acid and vinylacetate and butadiene; (47) modified polyacrylates (MPAC) alone obtained from a copolymer of carboxylic acid and dodecyl acrylate and butadiene; (48) modified polyacrylates (MPAC) alone obtained from a copolymer of carboxylic acid and octadecyl acrylate and butadiene; (49) modified polyacrylates (MPAC) alone obtained from a copolymer of carboxylic acid and hydroxyethyl acrylate and butadiene; (50) modified polyacrylates (MPAC) alone obtained from a copolymer of carboxylic acid and hydroxypropyl acrylate and butadiene; (51) modified polyacrylates (MPAC) alone obtained from a copolymer of carboxylic acid and itaconic acid and butadiene; (52) polyvinylidene fluoride (PVDF) alone; (53) modified polyethylene (MPE) alone, (54) modified polydienes (MPD) alone.

The species with two components are:

(55-105) PVDF with one of the corresponding 51 polymers or copolymers for MPAC listed above as 1-51; (106-156) MPE with one of the corresponding 51 polymers or copolymers for MPAC listed above as 1-51; (157-207) MPD with one of the 51 polymers or copolymers for MPAC listed above as 1-51; (208) PVDF with MPE; (209) PVDF with MPD.

The species with three components are:

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(210-260) PVDF with MPE and one of the 51 corresponding polymers or copolymers for MPAC listed above as 1-51; and (261-311) PVDF with MPD and one of the 51 corresponding polymers or copolymers for MPAC listed above as 1-51.

Second category of species for the separation membrane:

A single species for the separation membrane is to be elected from the following species:

- 1) non-porous polyalkylene oxide film;
- 2) a film made by coating a blend of polyalkylene oxide and polyvinylidene fluoride (PVDF);
- 3) a micro-porous polypropylene film;
- 4) three-layered composite film of polypropylene/polyethylene/polypropylene;
- 5) a separation membrane produced from polymethyl methacrylate and polyvinylidene fluoride.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species from each of the two categories above for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, there are no generic claims.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

2. Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).
3. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).
4. Any inquiry concerning this communication or earlier communications should be directed to examiner Susy Tsang-Foster, Ph.D. whose telephone number is (703) 305-0588. The examiner can normally be reached on Monday through Thursday from 9:30 AM to 8:00 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached at (703) 308-2383. The phone number for the organization where this application or proceeding is assigned is (703) 305-5900.

The fax phone numbers for the organization where this application or proceeding is assigned is (703) 872-9310 for regular communications and (703) 872-9311 for After-Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

st/19 May 2003

Amy Isang Foster